

**ORDER**

**DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION**

6340.2A

19 Sept 72

RECONDITIONING OF RIGID RADOMES IN THE NATIONAL AIRSPACE  
SUBJ: SYSTEM (RIS: SM-6340-1)

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1. PURPOSE. This order establishes the procedure for the periodic reconditioning of rigid radomes in the National Airspace System. It also establishes areas of responsibilities for program accomplishment and reporting.
2. DISTRIBUTION. This order is distributed to the Washington headquarters of Airway Facilities Service to the branch level; Systems Research and Development and Logistics Services to the division level; regional Airway Facilities and Logistics divisions; the FAA Depot and Airway Facilities Sectors.
3. CANCELLATION. Order 6340.2, Reconditioning of Rigid Radomes in the National Airspace System (RIS: SM-6340-1) dated 5/13/69 is cancelled.
4. REFERENCE. Handbook 6030.18A, Mobile Air Traffic Control, Navigational Aid, Communication and Power System, which prescribes procedures pertaining to provision of a temporary facility.
5. DEFINITIONS.
  - a. Rigid Radome - a self-supported spherical housing for an antenna of space frame or load-bearing shell construction. Component panels made of resined fiberglass, rigid polyurethane foam or plastic. Sizes range from 17 feet to 65 feet major diameter.
  - b. Reconditioning - the work required to accomplish the standard procedures outlined in FAA Depot Specification, EPB-R-23C dated 1/19/72, normally consisting of refurbishing, caulking and painting or any combination thereof.
  - c. Depot Level Maintenance (DLM) - that maintenance which can only be accomplished through the use of special rigging, tools and other equipment and materials and administered by the Aeronautical Center whether accomplished by Depot personnel or by contractual service.
  - d. Regional Level Maintenance - any maintenance performed by regional, area or sector personnel that includes, but is not limited to, minor patching, caulking and/or spot painting as may be accomplished without the use of special rigging and working equipment not normally supplied to the facility.

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Distribution: WAF-3; WRD/LG-2; MAF-2; CDE-3; RAF/LG-2;  
FAF-2 (Minimum)

Initiated By: AAF-210

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- e. Pre-DLM Survey - a technical evaluation conducted once a year by regional personnel to determine the condition of each radome.
  - f. Radar Shutdown - this will refer to either a primary radar shutdown or a reduction in radar signal power (magnetron operation) to a level which will produce an RF power density within the working area not exceeding  $0.01 \text{ watts/cm}^2$ . Operation at this level provides reduced but useful radar coverage yet reduces the RF radiation to a safe level as defined in FAA Order PT P 3900.2A and subsequent revisions. Operation of the ATCBI beacon will normally be allowed during radome reconditioning.
6. BACKGROUND. Deterioration of individual radome panels caused primarily by weathering can lead to structural inadequacy of the radome itself. Retardation of deterioration and prevention of structural deficiency is provided by periodic radome repainting, preferably at four year intervals. In addition, complete reconditioning may also be necessary in some cases at indefinite intervals.
7. PROGRAM DETERMINATION. This order shall apply to all rigid radomes in use in the National Airspace System which require DLM regardless of the type of antenna housed. Specific locations to be reconditioned shall be determined by the Aeronautical Center prior to the issuance of the annual national contract. Factors to be considered will be past history, site conditions, technical factors, results of pre-DLM surveys and regional recommendations.
8. PROGRAM OPERATION. Responsibilities of the various elements involved are as follows:
- a. Region
    - (1) Perform a yearly pre-DLM survey on each rigid radome in service except those that have been or will be reconditioned during the report year. Report the findings using FAA Form 6340-1 to AAC-1; Attn: AAC-440, prior to 1 September of each year. The success of radome reconditioning depends to a great extent on this survey. The degree of deterioration of individual panels has been noted to vary from section to section of the radome. The condition of the base panels may not reflect the condition of the topmost panels. To be of maximum effectiveness, this evaluation should not be restricted to one area of the radome surface.

- (2) Review and comment on the yearly tentative schedule as developed by the Depot, advising of changed conditions or other requirements. Due date for submission of comments is 1 November of each year.
- (3) Schedule the radar shutdown and coordinate with all elements involved in operating, maintaining and using the radar, both within the region and external to the region.
- (4) Determine if a temporary radar facility will be required during the reconditioning. This requirement must be substantiated by a cost vs. benefit study. It should be noted that a continuous radar shutdown is not required during reconditioning since the facility can be restored to full power on short notice. Normally, reconditioning can be accomplished in four or five shutdown periods of eight to ten hours each.
- (5) Effectuate the arrangements for provision of a temporary radar, if required, as outlined in Handbook 6030.18A.
- (6) Select an individual from within the region who will be designated the field representative of the Aeronautical Center's contracting officer's representative (COR). Selection can be made from any organizational level, however, the individual selected should be knowledgeable of rigid radomes and experienced in inspection of construction contracts. For contractual purposes, he will be identified as the "FAA Inspector." The responsibilities of the FAA Inspector shall be as follows:
  - (a) Coordinate all activities involving the contractor, sector, air traffic, Aeronautical Center, etc., including those duties described by the contract documents.
  - (b) Perform daily site inspection.
  - (c) Maintain a written record (Job Diary) of all daily activities pertinent to the reconditioning project, including, but not limited to, weather conditions, time of work, time of shutdowns, delays and any other factors that may have a bearing on effective contract administration.
  - (d) Perform the final acceptance inspection and forward a final inspection report, along with the daily records, to AAC-1, Attn: AAC-440.

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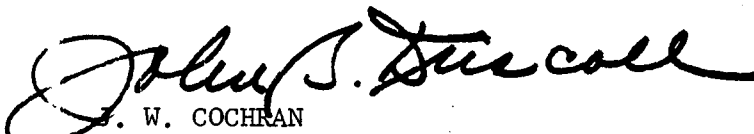
b. Aeronautical Center/FAA Depot

- (1) Furnish each region a copy of the FAA Depot Specification, EPB-R-23C, for reference in conducting the pre-DLM surveys.
- (2) Prepare yearly tentative schedule of those sites proposed for reconditioning based on past history, pre-DLM surveys, etc. Schedule yearly radome reconditioning work for accomplishment during the months of June, July, August and September. Coordinate tentative schedule with regions and furnish a copy of the proposed schedule to the Airway Facilities Service. Due date for submission of tentative schedules is 1 October of each year. Furnish the Airway Facilities Service a copy of any changes in schedules.
- (3) Perform radome reconditioning either by Depot personnel or issuance of a national contract in accordance with applicable specifications.
- (4) Prepare IFB if accomplishment is to be by national contract.
- (5) Issue and administer contract. Award contract prior to 1 May of each year. Distribute copies of the contract to affected regions and to the Airway Facilities Service.
- (6) The Aeronautical Center's contracting officer will appoint a Resident Engineer at the Depot to be the contracting officer's representative (COR). This Resident Engineer will monitor the activities of the FAA Inspectors as designated in 8.a.(6). He will also be the contact point at the Depot with respect to resolution of problems concerning contract performance in the field.

c. Airway Facilities Service

- (1) Review tentative schedule and advise Depot of recommendations.
- (2) Resolve scheduling conflicts not resolvable through direct Depot/Regional coordination.
- (3) Furnish engineering assistance when required.
- (4) Provide overall program guidance, monitor program status and periodically evaluate program administration and results achieved.

9. FUNDING. Program accomplishment will be funded as follows:
- a. Anticipated yearly requirements will be funded with operations appropriations by FAA Depot response to annual budget Call for Estimates.
  - b. Regional requirements, such as for personnel, travel, and including provisions for the utilization of a temporary facility, if required, will be included in regular annual operations appropriations.
10. EMERGENCY REQUIREMENTS. Nonscheduled requirements for emergency repairs shall be coordinated by the cognizant regional office with the Depot. The cognizant regional office shall notify the Airway Facilities Service of the emergency requirements. Emergency requirements for repair of rigid radomes will have priority over scheduled overhaul requirements. Adjustments in scheduling caused by emergency requirements will be made by the Depot after coordination with those regions directly affected. Scheduling conflicts not resolvable through such coordination will be submitted to the Airway Facilities Service for resolution.
11. REPORTS AND FORMS. RIS: SM-6340-1, Pre-DLM Radome Evaluation Data, is assigned to this report. FAA Form 6340-1 (5-69), Pre-DLM Radome Evaluation Data, FSN 0052-694-6000, is available at the Depot in pads of 100. This form shall be completed yearly by each region on all radomes in service within the region as directed in paragraph 8.a.(1) of this order. Appendix 1 of this order outlines the procedures for completing FAA Form 6340-1. It shall be submitted to AAC-1, Attn: AAC-440, prior to 1 September of each year.

  
J. W. COCHRAN  
Director, Airway Facilities Service



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Appendix 1

APPENDIX 1. PRE-DLM RADOME EVALUATION DATA SHEET

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1. Pre-DLM Radome Evaluation Data Sheet. Regional personnel shall use FAA Form 6340-1, Pre-DLM Radome Evaluation Data Sheet to report on conditions of rigid radomes. Report to AAC-1, ATTN: AAC-440 prior to 1 September of each year. \*
2. Preparing FAA Form 6340-1. Opposite this page is a sample evaluation Data Sheet with numbered blocks. Complete the form by inserting in:
  - a. Block 1. The region where the radome is located.
  - b. Block 2. The sector in which the radome is located. \*
  - c. Block 3. The official geographic place name of the facility being evaluated.
  - d. Block 4. The type facility being evaluated; e.g., ARSR-2, FPS-67.
  - e. Block 5. The date(s) that the evaluation is performed.
  - f. Block 6. The time spent in performing the evaluation, including reporting time.
  - g. Block 7. Various components inspected; e.g., panels, joints, bolts, etc.
  - h. Block 8. The name and title of the person making the evaluation.
  - i. Block 9. The date(s) that is the most favorable for this particular facility to be reconditioned.
  - j. Block 10. An alternate period that would be favorable for accomplishment.
  - k. Block 11. Those factors unique to the particular facility as to why accomplishment should be at a particular time or between certain hours.
  - l. Block 12. Information as to the requirement for a temporary radar and if it will be provided.
  - m. Block 13. Exactly what will be required to recondition the radome, e.g., repainting, caulking, bolt replacement, etc. Also include a description of the condition of the panels, bolts, etc. For example, surface is glazed or cracked; several bolts rusted, holes in panels; caulking is loose or missing, etc.
  - n. Block 14. The signature of the reviewing official at regional level. \*
  - o. Block 15. The title of the reviewing official.
  - p. Block 16. The date of review.

NOTE: FAA Form 6340 will be revised at a later date to reflect the change in Block 2 from "Area" to "Sector."

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Appendix 1

PRE-DLM RADOME EVALUATION DATA				RIS: SM-6340-1	
1. REGION	2. AREA	3. SITE LOCATION		4. TYPE FACILITY	
5. DATE(s) OF EVALUATION		6. TIME REQUIRED FOR EVALUATION			
7. COMPONENTS INSPECTED			8. INSPECTED BY		
9. RECOMMENDED PERIOD FOR RECONDITION ACCOMPLISHMENT					
YEAR		MONTH		DAYS HOURS	
10. ALTERNATE PERIOD FOR RECONDITIONING					
YEAR		MONTH		DAYS HOURS	
11. FACTORS INFLUENCING SHUTDOWN PERIOD (Weather, access, peak air traffic, etc.)					
12. WILL TEMPORARY RADAR BE PROVIDED					
<input type="checkbox"/> YES		<input type="checkbox"/> NO		<input type="checkbox"/> NOT REQUIRED	
13. RECOMMENDED SCOPE OF RECONDITIONING ACCOMPLISHMENT					
14. SIGNATURE OF REVIEWING OFFICIAL			15. TITLE		16. DATE

FAA FORM 6340-1 (5-69)

